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## Distance as a Barrier to Melanoma Care

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### Abstract

#### Aim

Our aim was to review cases of melanoma diagnosed histologically in UHK in 2016 and to compare them to cases of melanoma nationally and in Kerry.

#### Methods

For each patient we recorded age, Breslow depth, and shortest distance to travel by car and travelling time (without traffic) to the South Infirmary Victoria University Hospital (SIVUH) from their primary residence (calculated using Google maps™ (2018)).

#### Results

20 cases of invasive melanoma were diagnosed in UHK in 2016. Of the 20 cases, 9 (45%) presented at a very advanced stage with a Breslow depth of greater than 4mm. A further 7 (35%) cases had a depth of 1.5-4mm. These patients with invasive melanoma had a mean age of 72.5 ( $\pm 15$ ). The mean shortest distance to travel from the patient's primary residence to the SIVUH was 114.8km ( $\pm 15.5$ ) taking an average of 102 minutes ( $\pm 14.6$ ) by car.

#### Conclusion

Cases of melanoma diagnosed locally in UHK presented at an advanced stage compared to the national average. We suspect that the long distances to travel to the SIVUH pigmented lesion clinic is a barrier for these patients.

**Keywords:** Pigmented lesion clinic, University Hospital Kerry, Melanoma, Distance to travel

### Introduction

Melanoma of the skin is the ninth most common cancer in Ireland accounting for 2.4% of all malignant neoplasia in men and 4.2% in women and incidence continues to rise.<sup>1</sup> Early detection and excision is the only effective treatment with survival dependent on stage at diagnosis.<sup>2</sup> Prognosis is best indicated by the Breslow thickness, and thinner melanomas are associated with a substantially higher 5-year survival rate.<sup>3</sup> Specialist pigmented lesion clinics (PLC) with a rapid access policy were first set up in the UK from the late 1980's with the aim of earlier detection and treatment of melanoma, and reducing melanoma-related mortality. A PLC was first established in Cork in 2003, which resulted in the earlier detection and improved prognosis of melanoma patients.<sup>4</sup> A significant increase in diagnostic accuracy was seen in a similar study in the Mid-West after the introduction of a PLC in 2012.<sup>5</sup> In Ireland, the National Cancer Control Programme's (NCCP) Melanoma General Practitioner (GP) guidelines recommend that patients who present with a suspicious pigmented lesion should be referred, with the lesion intact, to a Consultant Dermatologist or Plastic Surgeon.<sup>6</sup> In Ireland, however, there are large disparities in access to specialist dermatology care across the country, especially between rural and urban areas. It is widely accepted that distance and burden of travel is an important issue that can influence access to healthcare in patients with cancer.<sup>7</sup> The farther that patients travel, to reach their diagnosing providers, the more advanced their stage at diagnosis is likely to be.<sup>8</sup> Currently, there is no

access to a rapid access PLC in University Hospital Kerry (UHK) with patients referred instead to Cork for assessment. Some patients, however, are unable to travel this often considerable distance to the rapid access clinic and instead present locally for treatment. We were concerned that the lack of a local PLC in Kerry may result in delayed treatment and more advanced disease at presentation. We therefore wanted to assess the stage of melanomas diagnosed histologically in UHK.

## Methods

We reviewed the cases of melanoma diagnosed locally in UHK in the public healthcare system in 2016 and compared them to cases of melanoma nationally and in Kerry. Melanomas diagnosed outside the public sector in Kerry were excluded. For each patient we recorded age, Breslow depth, and shortest distance to travel by car and travelling time (with normal traffic) to the South Infirmary Victoria University Hospital (SIVUH) from their primary residence (calculated using Google maps™ (2018)). We compared our results to the National Cancer Registry of Ireland (NCRI) figures, for the years 2009 to 2013, nationally and for Kerry.

## Results

In 2016, 30 cases of melanoma were diagnosed histologically in UHK. Eighteen (60%) were male, and twelve (40%) were female. Ten (33.3%) of cases were melanoma-in-situ, nineteen (63.3%) were invasive melanoma, and one case (0.03%), with a Breslow depth of 2.8mm on punch biopsy, who declined excision. Of the twenty cases of invasive melanoma, nine (45%) presented at a very advanced stage with a Breslow depth of greater than 4mm. A further seven (35%) cases had a depth of 1.5-4mm. The mean Breslow depth was 3.9mm ( $\pm 2.7$ ). These patients with invasive melanoma had a mean age of 72.5 ( $\pm 15$ ). The mean shortest distance to travel from the patient's primary residence to the SIVUH was 114.8km ( $\pm 15.5$ ). These patients would have travelled for an average of 102 minutes ( $\pm 14.6$ ) to attend the SIVUH from their primary residence by car.

## Discussion

Cases of melanoma diagnosed histologically in UHK presented at an advanced stage compared to the national average and the average for Kerry.<sup>1</sup> 80% of the invasive melanomas in UHK had a depth of 1.5mm or greater compared to the national average of 33% and the NCRI average for Kerry of 31% (NCRI 2009-2013). 45% presented with a depth greater than 4mm compared to the national average of 12.9% and the NCRI average for Kerry of 13% (NCRI 2009-2013). Our concern is that patients are presenting later due to lack of access to a local PLC. These patients are instead treated in a non-specialised setting leading to delays in assessment and excision. We suspect that the long distances to travel to the SIVUH pigmented lesion clinic is a barrier for patients who are elderly or disadvantaged, and thus unable to travel. A PLC in UHK would provide these patients with local rapid access, with the aim of improving uptake of early specialist care and intervention. The presence of a PLC in UHK would also create better awareness of melanoma, both amongst healthcare practitioners and the general community, with resulting earlier detection.<sup>4</sup>

## Declaration of Conflict of Interest:

The authors have no conflicts of interest to declare.

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